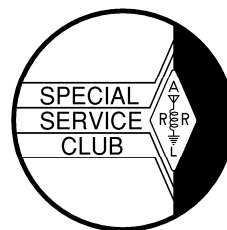




SIGNAL



de NINC

November 2005 Volume 14 Number 11

This Month's Meeting

This month's meeting program will be on Operating The FM Satellites by Joel W1JMM

ARRL members can give your outgoing QSL cards to Bob W1XP and the club will pick up the cost of getting them to the League.

Last Month's Meeting

Last month's meeting program was a Card Sort for the W1 Incoming QSL Bureau. This is the presort stage where incoming QSL cards get sorted based on the first letter of the receiving callsign suffix. There are twenty-six "letter" sorters that get the cards next and sort them down to the individual. We sorted about 17,000 cards in two hours. The cards were then repacked and sent on to the Bureau for the final step.

The Club provided pizza and soft drinks after we finish sorting.

The updates for the Yearbook were available. Any-one still needing one should contact Stan.

Card sorting got underway so the only business conducted was the certificate awarded to Leo which is shown in a later picture.



The task at hand, 1000's of QSL cards.



We arranged two rows of tables to spread out the sorters. Each row had an instance of the alphabet A-Z on one edge and an instance of the alphabet split in the middle on the other edge. The idea being

you don't have to move more than one half the length of the tables to get to any letter.



Stan presents Leo K1LK his award for Field Day.

Present at the October Card Sort and pizza party were ;Phil KB1JKL, John KB1HDO, Dennis K1LGQ, Rod WA1TAC, Joel W1JMM, Bob W1XP, Larry KB1ESR, Don AB1DS, Peter KB1LZH, Dick KB1MBR, Ralph KD1SM, Leo K1LK, Stan KD1LE, Erik W1ZBT, Les N1SV, and Skip K1NKR.

There was an update on preparations for the Hawthorne Brook ISS contact.

Adopt A Highway

The last cleanup was Sunday October 23rd. The weather was marginal but we finished without getting wet.

The next and last cleanup of the year is November 19th.

Note the change of day to Saturday.

We are going to do the cleanup right after breakfast at Tiny's. This will enable some people who can not make the Sunday schedule to help out. We need a good turn out so we can do a detailed cleanup to hold us over until the next one in April 2006.

We meet at the Nashua River common at 9:00 AM. Our clean up day is Saturday after breakfast.

Preparing for the ISS Contact at Hawthorne Brook School

W1XP and KD1LE have been preparing the equipment for the upcoming ISS contact.

Below is a picture of the antennas we will use. On the left is a circularly polarized 22 element antenna. The 440 antenna mounted on the same rotator is for practice purposes. The actual contact is two meters only. In the lower right of the picture is a 14 element antenna to be used for the secondary station. NASA requires two independent stations be ready to support the contact.



We also need a reasonable gain vertical antenna and some other bits that are not yet defined. We hope to have the first system together this week and be able to track objects with it. NASA requires there be two independent stations available in case of failures though the second station need only use a vertical antenna (requested above).

We hope to set up equipment the evening before the contact so we can use help preparing, on the afternoon the day before and on the day of the event.



Above is the first station put together for the ISS contact. On the left is the computer that calculates satellite location and controls the azimuth and elevation rotators via an interface box and rotator control box in the left center stack. Center right is the radio and right is the power amplifier.

A second station will be roughly the same and we are now collecting that equipment.

The schools contact has been set during the week of November 28th. Wednesday the 30th is the first preference asked for by the school.

Board Meeting Notes

The Board Meeting was to take place November 10th so the notes were not available for the newsletter due to the holiday on Friday and the printing schedule.

Items to be discussed included

We received a Special Service Club Certificate from ARRL. It was shown at the last meeting.

Speakers and Programs for the Fall

Status of the ARISS contact work.

Treasurers Report

Field Day Results

The results for 2005 Field Day were published in the November QST. First and most important we had a great time and learned a few new things. The extreme heat and humidity were a challenge that we

met. On the air NVARC put in another great showing. In the 3A class overall we placed 42 of 262 entrants.

The photo below is the VHF/UHF/satellite antenna structure and the solar cells provided by Jim N8VIM. They provided the solar power for our "alternative energy" points and actually powered the UHF/VHF station for most of the contest.



We scored 4744 points and logged 1112 contacts.

In Eastern Mass we were third, only the North Shore Radio Association and the Sturdy Hospital ARC scored higher. The Boston ARC also was in the 3A category and scored 2042 with 321 contacts.

In Western Mass the only 3A entrant was W1GZ the Montachusett ARA who scored 2504 points and made 493 contacts.



Bob W1XP and Leo K1LK at the CW Station

It's not too early to begin thinking about next year. We would like to have a Coordinator and choose a site in the next few months. This should allow others to begin planning what they would like to do.

2006 Flea Markets and Conventions

February	
18	Algonquin, Marlboro
March	
26	Spring Flea Market, Framingham
April	
8	IRS Hamfest and Flea Market
9	Londonderry, NH
August	
25-27	Boxboro/ARRL NE Convention

Advertisements

Tell them you saw it in the Signal. Advertisers should contact the NVARC Treasurer for information.



BERNIE PEABODY N1IMO
DICK WILBORG W1ZC

BELTRONICS, INC.
AMATEUR RADIO SERVICE DIVISION
www.beltronics.net

603-465-2422
603-889-7905
800-323-5876

P.O. BOX 330
19 PROCTOR HILL RD.
HOLLIS, NH 03049

FAX 603-465-3320

Treasurers Report

Income for October was \$60 in membership dues, and \$1.41 from bank savings interest. Expenses were \$14.80 for newsletter postage and \$50.48 for the October card sort meeting refreshments leaving a net expense of \$3.87 for the month.

Current balances:

General fund \$4395.97
Community fund \$2079.95



As of 7 October we have 60 current members and four renewals outstanding. Please check your newsletter mailing label for your expiration date or look for the email reminder I send you if you are overdue.

NVARC Club Net

The club net has been meeting on the 442.900 repeater. Recent participants include Dave N1MNX, Bob W1XP, Bob AB1CV, Joel W1JMM, John KB1HDO, Larry KB1ESR, Skip K1NKR, Gary K1YTS, Ralph KD1SM, Stan KD1LE and Don AB1DS, Peter KB1LZH, and Dick KB1MBR.

The net is a good place to bring information for the club and questions or discussions. The net meets at 8:00 PM Monday evenings on the 442.900 N1MNX repeater.

ARRL Letter

MEANINGFUL ENTRY-LEVEL LICENSE PRIVILEGES ARE TOP PRIORITY, ARRL SAYS

The ARRL again has urged the FCC to provide meaningful operating privileges to entry-level Amateur Radio licensees, including access to HF, even if the Commission doesn't want to create a new license class. Commenting in response to the FCC's July 9 Notice of Proposed Rule Making and Order (NPRM&O) in WT Docket 05-235, the League also stood by its stance that the Commission retain the 5 WPM Morse code requirement for Amateur Extra applicants, but do away with it for General applicants.

"Retaining Morse telegraphy as a requirement for only the Amateur Extra class license, in ARRL's view, places Morse telegraphy in a proper, balanced perspective," the League told the Commission October 31, the deadline to comment in the proceeding. Reply comments are due November 14.

The FCC's NPRM&O proposed eliminating the 5 WPM Morse code requirement for all Amateur Radio license classes but denied requests to create a new entry-level license class with limited HF privileges. The League said the FCC needs to finish the job of license restructuring it began in 1998 by reviewing operating privileges for all classes--especially at the first rung of the licensing ladder.

"The elimination of Morse telegraphy, absent a more thorough review of operating privileges in the Amateur Service, will not address the ascertained flaws in the only entry-level license class," the ARRL asserted, referring to the Technician license. "That license class is not attracting or keeping newcomers in its present configuration, and it needs fixing right now."

The ARRL argued that if the FCC will not create a new Novice class license as the League had suggested in its earlier Petition for Rule Making (RM-10867) in the proceeding, it should modify Technician operating privileges instead. The present licensing regime limits Technicians to VHF bands and above, "leaving newcomers to the Amateur Service isolated from their peers holding higher class licenses," the ARRL said. "The Technician class is, for too many, a 'dead end' to what might otherwise be an active, progressive interest in Amateur Radio, technical self-training and incentive-based educational progress in the many facets of the avocation."

The ARRL reminded the FCC that its restructuring plan enjoyed the support of the two Amateur Radio licensees in Congress--Rep Greg Walden, W7EQI (R-OR) and Rep Mike Ross, WD5DVR (D-AR).

Eliminating the Morse requirement for General class applicants "creates an anomaly with respect to the Technician class license," the ARRL noted. "If the telegraphy requirement for the General class license is eliminated, the distinction between the Technician class licensee and the Technician Plus class licensee will have disappeared completely." Therefore, the League contends, there is a logical basis for affording Technician licensees entry-level HF privileges.

Under the ARRL plan, Technicians would have telegraphy and data privileges on 3.55-3.7 MHz, 7.05-

7.125 MHz and 21.05-21.20 MHz at 100 W output and on 28.05-28.3 MHz at 50 W output. The League wants the FCC to provide HF phone and image privileges to Technicians on 3.9-4.0 MHz, 7.2-7.3 MHz and 21.35-21.45 MHz at 100 W output, and on 28.3-28.5 MHz at 50 W.

These recommended privileges take into account the FCC's proposal to adopt the ARRL's so-called "Novice refarming" plan in WT Docket 04-140. The ARRL had earlier proposed the same privileges for a reconstituted Novice license.

The time is right to take a look at the operating privileges of Amateur Radio license classes, the ARRL said in its filing, "because the entry-level license class is demonstrably neither attractive to newcomers nor encouraging in terms of retaining the interest of license holders."

To back up its assertions, the League pointed to surveys it conducted in 1992 and 2003. Nearly half of the licensees responding in the latter poll indicated that they were not currently active in Amateur Radio--up 30 percent from the earlier survey. "The number of inactive Technician class licensees is 46 percent," the ARRL noted, adding that more than a quarter of Technicians responding in 2003 said they'd never even been on the air.

The League pointed out that the FCC's proposed across-the-board elimination of the Morse requirement eliminates a simple mechanism for current Technician licensees to obtain HF operating privileges--passing the 5 WPM code exam.

If the FCC does nothing other than eliminate the Morse requirement for the General license, the ARRL commented, it would make no sense to continue to deprive Technician licensees the HF operating privileges that Tech Plus licensees now enjoy.

"To do otherwise is to draw a distinction that is entirely arbitrary," the League concluded.

HAM RADIO HAS ROLE IN FIVE YEARS OF CONTINUOUS ISS HUMAN HABITATION

Five years ago this week, the International Space Station Expedition 1 crew of US astronaut and Expedition 1 Commander William "Shep" Shepherd, KD5GSL, and Russian cosmonauts Yuri Gidzenko and Sergei Krikalev, U5MIR, became the first humans to inhabit the ISS on a long-term basis. Bill McArthur, KC5ACR, who commands Expedition 12, the current ISS crew increment, took note of the occasion when he spoke with reporters this week.

"We've done things that were just inconceivable 50 years ago," McArthur said. "I think that we have demonstrated that human beings can live and work in space, and, given the will, we can return to the moon not just to visit but to stay there permanently and in not-too-distant future, send people to Mars."

Bill Gerstenmaier, NASA's associate administrator for space operations, called the five-year milestone the first leg of a much longer journey "The experiences we're having on station with crews on long-duration missions are teaching us what it will take to send astronauts on longer missions to the moon and into the solar system," he said.

It was on October 31, 2000, that a Russian Soyuz transporter carrying the ISS space pioneers blasted off from Baikonur Cosmodrome in Kazakhstan and docked with the ISS November 2. At the time, Shepherd was only the second US astronaut to go into space aboard a Russian launch vehicle. Krikalev went on to serve as commander of the ISS Expedition 11 crew.

Each of the 12 crews that have lived on the ISS to conduct assembly and research activities has included at least one US radio amateur. McArthur just this week completed the 200th successful Amateur Radio on the International Space Station (ARISS) school group contact. Crews also have gone on the air to participate in such events as ARRL Field Day and scouting's Jamboree On The Air (JOTA) as well as to make casual QSOs. The Expedition 12 crew of McArthur and Russian cosmonaut Valery Tokarev will remain on the ISS until next April.

The initial ARISS gear already was aboard the space station by the time the first crew arrived. The Expedition 1 team installed and activated the VHF gear on FM voice and packet under the US call sign NA1SS and the Russian call sign RS0ISS.

In late 2003, the ARISS program attained another milestone with the installation and checkout of the Phase 2 Amateur Radio gear. A Kenwood TM-D700E transceiver is at the heart of the Phase 2 station, located in the ISS Zvezda Service Module--the crew's living quarters. Crew members now routinely use the Phase 2 station to conduct ARISS school group contacts.

ARISS is looking forward to activation of a Yaesu FT-100 HF/VHF/UHF transceiver and a slow-scan television (SSTV) system in the near future.

NASA has been marking the fifth anniversary of continuous ISS human occupancy with special activities and has set up a special Web site <http://www.nasa.gov/mission_pages/station/main/5_year_anniversary.html>.

The largest and most complex spacecraft ever built, the ISS is the result of a 16-nation partnership led by the US. More ISS information and photos are on NASA's Space Station page.

ARISS is an international educational outreach with US participation by ARRL, AMSAT and NASA--some information from NASA

"TOP BAND DRAGON'S FIRE" SIGNAL BLANKETING 160 METERS IN ASIA

The IARU Monitoring System (IARUMS) says radio amateurs in Japan and elsewhere in Asia and Oceania are reporting an unidentified intruder signal on 160 meters. In Japan, the wideband signal, which IARU Region 2 Monitoring System Coordinator Bill Zellers, WA4FKI, has dubbed "Top Band Dragon's Fire," reportedly began transmitting continuously about October 1, blanketing 160 meters and rendering it useless for Amateur Radio work in some places.

"The intruder is detectable from approximately 1700 kHz up to about 1930 kHz," said one report, likening the sound to "a diesel motor with a ticking sound at a constant rate which is evenly spread across the band." The signal has been heard in the US Northwest at about 1830 kHz on a north-pointing Beverage. Reports also have arrived from New England.

First heard as long ago as December 2004, the signal turns up at different times at different locations, reports indicate. In some cases, it's only during so-called "gray line" propagation, while others hear the signal 24/7.

Near Perth, Australia, the intruder was heard slowly rising out the noise floor about a half-hour after sunset, increasing to around S7 and remaining long into the night. Amateurs in Singapore report that the signal recently shifted from wideband noise to a pulsed signal.

Veteran Top Band DXer Tom Rauch, W8JI, in Georgia says he can "just detect a noise floor increase some mornings," but was unable to identify an actual signal.

Forward reports, accompanied by sound recordings if available, to Chuck Skolaut, K0BOG <cskolaut@arrrl.org>, at ARRL Headquarters.

FLORIDA AMATEUR RADIO VOLUNTEERS ANSWER THE CALL

Amateur Radio Emergency Service (ARES) and Radio Amateur Civil Emergency Service (RACES) volunteers from all three Florida ARRL sections answered the call this week to provide communication support in the wake of Hurricane Wilma. Millions of residents in South Florida remained without power at week's end, and relief agencies were continuing efforts to meet basic needs of affected residents. Ham radio volunteers turned out in force to assist them, although the need for additional Amateur Radio support waned—perhaps only momentarily—toward week's end.

"Things seem to be winding down," ARRL Southern Florida Section Emergency Communications Coordinator Jeff Beals, WA4AW, said October 28. "We've put a temporary hold on new operators to assist the affected counties in the Southern Florida Section." As of week's end, Beals said, some 60 Amateur Radio volunteers from Florida plus a few from outside the state were deployed in hurricane-affected counties.

Beals has been coordinating the deployment of Amateur Radio volunteers in his section with assistance from ARRL West Central Florida SEC Neil Lauritsen, W4NHL, and ARRL Northern Florida SEC Joe Bushel, W2DWR. Since Wilma raked the Florida peninsula, Amateur Radio volunteers have been providing vital tactical communications for the Red Cross and its shelters, special care facilities, county emergency operations centers (EOCs), state logistical staging areas (LSAs), and points of distribution (PODs) for food, ice and water, Beals said.

At week's end Beals was visiting EOCs in Broward and Palm Beach counties to determine their present and future needs for Amateur Radio communication support. He said things could pick up again next week. "I believe the situation is as good as it can be at the moment," Beals explained October 28, "but we believe there may be additional needs next week and the week after, as well as to replace people who have been working long hours at their posts."

Earlier in the week in Palm Beach County, ARRL Emergency Coordinator Dave Messenger, N4QPM, reported Amateur Radio volunteers were staffing three Red Cross shelters, a special care unit, the Red Cross Chapter house, the LSA at the county

fairgrounds and the county EOC. Staging areas for volunteers in Southern Florida are in the Palm Beach and W Palm Beach and Broward County EOCs.

Beals said the Amateur Radio link between the Broward EOC and the Palm Beach Fairgrounds distribution point has proven invaluable as a primary communication channel because of problems with satellite telephones.

The Wellington RACES team spearheaded by RACES Radio Officer Larry Lazar, KS4NB, was handling local health-and-welfare traffic. The Salvation Army Team Emergency Radio Network (SATERN) on 14.265 MHz also was taking Hurricane Wilma health-and-welfare traffic. HF traffic nets have been running smoothly throughout the activation.

Northern Florida State Government Liaison Ted Zateslo, W1XO, reported generators in high demand this week as widespread power outages hampered relief efforts. Southern Florida SM Sherri Brower, W4STB, still without electricity, was told it could be up to two weeks before power is restored in her area, Zateslo said. Brower does have telephone service, however. Beals said that he and Brower "wish to express our appreciation to all the amateurs who have answered the call for assistance to our section."

ARRL 2005 HOLIDAY TOY DRIVE KICKING INTO GEAR

Toys already have begun showing up in Memphis, Tennessee, in response to the ARRL 2005 Holiday Toy Drive appeal. The League has partnered with The Salvation Army for this year's effort to brighten the holiday season for children in the coastal areas of Alabama, Mississippi and Louisiana left homeless or displaced in the aftermath of hurricanes Katrina and Rita.

"As The Salvation Army continues to provide assistance to the victims of the largest natural disaster in modern US history, we are excited to partner with the ARRL in providing toys for children affected by hurricanes Katrina and Rita this holiday season," said Mark Jones, The Salvation Army's public relations director.

Because it still has the facilities to manage a large toy drive, The Salvation Army will handle the distribution end of the program. Its facility in Jackson, Mississippi, will coordinate distribution throughout the Gulf Coast region.

Country music artist Patty Loveless, KD4WUJ, is the Holiday Toy Drive's national chairperson.

The collection point for the toys is in Memphis, Tennessee, where the League has secured a warehouse facility. Between now and December 10, the ARRL is encouraging ham radio operators throughout the US to purchase new, unwrapped toys for children ages 1 through 4 and send them with a QSL card to ARRL Toy Drive/The Salvation Army, 1775 Moriah Woods Blvd--Suite 12, Memphis, TN 38117-7125.

Volunteers in Memphis will sort and stock the toys, and in early December, the toys will be transported to The Salvation Army facilities in hurricane areas that need help the most at that time.

Amateur Radio volunteers turned out in force to support communication for relief and recovery operations in the Gulf Coast. ARRL Media and Public Relations Manager Allen Pitts, W1AGP, says the Amateur Radio community is once again in a position to make a difference.

"Thousands of families are without a place to live and will be homeless over the coming holiday season," he said. "For a child living out of a tent or car, FEMA trailer or someone else's home, the 2005 holiday season will be anything but jolly. But hams from all across the country are coming to their rescue again through the ARRL Holiday Toy Drive."

Cash donations from ARRL members also are welcome. League members may send checks to ARRL Holiday Toy Drive, 225 Main St, Newington, CT 06111. "Knowing that someone 'out there' remembers you is a start for these children," Pitts said.

More information about the ARRL 2005 Holiday Toy Drive is available on the League's Web site <<http://www.arrl.org/pio/>>.

ISS ASTRONAUT ADDS SOME ZEST TO JOTA 2005

International Space Station Expedition 12 Commander Bill McArthur, KC5ACR, has wasted no time in getting on the air from NA1SS as he settles in for his six-month stay in space. McArthur, who arrived at the ISS early this month with crewmate Valery Tokarev, has been on the air making casual contacts on 2 meters. He also thrilled several scout groups during the 2005 Jamboree On The Air (JOTA) over the October 15-16 weekend. Al Lark, KD4SFF ("scouting for fun"), worked NA1SS while

waiting for scouts to arrive at his JOTA operation at Paris Mountain State Park in Greenville, South Carolina. McArthur obliged Lark by sending his greetings to all scouts.

"Greeting to all the scouts worldwide. It's a thrill for us today to be participating in JOTA!" McArthur said.

Lark, who's South Carolina AMSAT Area Coordinator, says he recorded his QSO and replayed it to his scout group as well as to others he contacted during JOTA. "Everyone was thrilled to hear Bill's message from the ISS!" he said.

Steve, KB9UPS, was among the others lucky enough to snag a contact with NA1SS during JOTA weekend, Lark said. He also heard several other stations work McArthur. Amateur Radio on the International Space Station (ARISS) Ham Radio Project Engineer Kenneth Ransom, N5VHO, said McArthur's JOTA participation "wowed scouts and other hams." Among others, NA1SS also worked stations in Ontario, Virginia, New York and Texas.

Ransom said he heard McArthur work special event station W4J on the second pass over the central part of North America. "He was active over the West Coast on Sunday but didn't work to many folks then," Ransom said. Outside of JOTA, Ransom noted, NA1SS was heard October 17 over the US just after 1400 UTC--the start of McArthur's lunch break.

Ransom said he activated W5RRR at Johnson Space Center for JOTA on HF and satellite and worked a few stations, including K2BSA/5 and K5S, via AO-51. "I talked to scouts in the UK and Canada via HF," he added.

ARRL Education and Technology Program Coordinator Mark Spencer, WA8SME, observed that this year's JOTA was the best he'd heard in a number of years.

"Admittedly the bands were in pretty good shape," he said, "but what I observed was increased activity levels, more youthful voices on the radio, patient hams taking the time to encourage the mike-shy to get on the air and courteous hams clearing some frequency space to allow the scouts to get some solid contact. Kudos to all who participated, and to all who listened in."

K2BSA/5 reported a very successful operation at Camp Wisdom in Dallas, says Frank Krizan, KR1ZAN, who oversaw the event. "K2BSA made several successful contacts on AO-51 QRP," he

said. "The crew at K2BSA held their first Radio merit badge clinic under the leadership of James Alderman, KF5WT."

Scott Avery, WA6LIE, reported having an enjoyable QSO with NA1SS during a pass west of California during JOTA weekend. "He was also calling CQ for JOTA and worked one other station," Avery said. "I told him to get on the air more often. He said he plans on it." Avery was so excited about working NA1SS he called his wife into the shack to listen in on the contact.

Patrick McGrane, N2OEQ, on Long Island, New York, said he heard NA1SS during two passes over the US on October 15. "I made a brief contact during a one-degree elevation pass as he passed over the New Orleans area," he reported. McGrane said McArthur also told him he planned to get on the air more often for routine contacts.

The worldwide downlink frequency for NA1SS is 145.800 MHz. The voice uplink is 144.49 MHz for Regions 2 and 3 (The Americas, and the Pacific) and 145.20 MHz for Region 1 (Europe, Central Asia and Africa). There's more information on the ARISS Web site <<http://www.rac.ca/ariss>>.

ARISS is an international educational outreach, with US participation by ARRL, AMSAT and NASA.

Contest Calendar and DXpeditions

The information for a DXpedition can be quite detailed and may include bands, dates, number of stations, and times of day they plan to work certain continents so I can not list it all here. But if a country or prefix is of interest you can get more information at www.425dxn.org.

Contests November

19-21 ARRL November Sweepstakes Phone

December

2-4 ARRL 160 Meter Contest

10-11 ARRL 10 Meter Contest

January

1 Straight Key Night

7-8 ARRL RTTY Roundup

8-9 North American QSO Party

21-23 ARRL January VHF Sweepstakes

February

5-6 Delaware QSO Party

18-19 ARRL International DX Contest

DXpeditions

Call	Location	Until
9V1CW	Singapore	2008
5H3HK	Tanzania	March 2006
SU8BHI	Egypt	31 Dec 2005
T68G	Afghanistan	March 2007
ZD8I	Ascension Is	March 2006



**Nashoba Valley
Amateur Radio Club**

PO Box # 900
Pepperell Mass 01463-0900

<http://www.n1nc.org/>

President: Stan Pozerski KD1LE

Vice President: Peter Nordberg N1ZRG

Secretary: John Griswold KB1HDO

Treasurer: Ralph Swick KD1SM

Board Members:

Dave Peabody: N1MNX 2003-2006

Bob Reif: W1XP 2004-2007

Les Peters: N1SV 2005-2008

Editor: Stan Pozerski KD1LE

Emergency Coordinator: Den Connors KD2S

Photographer: Ralph Swick KD1SM

PIO: Dave Peabody N1MNX

Librarian: Peter Nordberg N1ZRG

Property Master: John Griswold KB1HDO

Webmaster: Les Peters N1SV

N1NC Trustee: Bruce Blain K1BG

Meetings are held on the 3rd Thursday of the month
- 7:30 p.m. - Pepperell Community Ctr. Talk-in
146.490 simplex

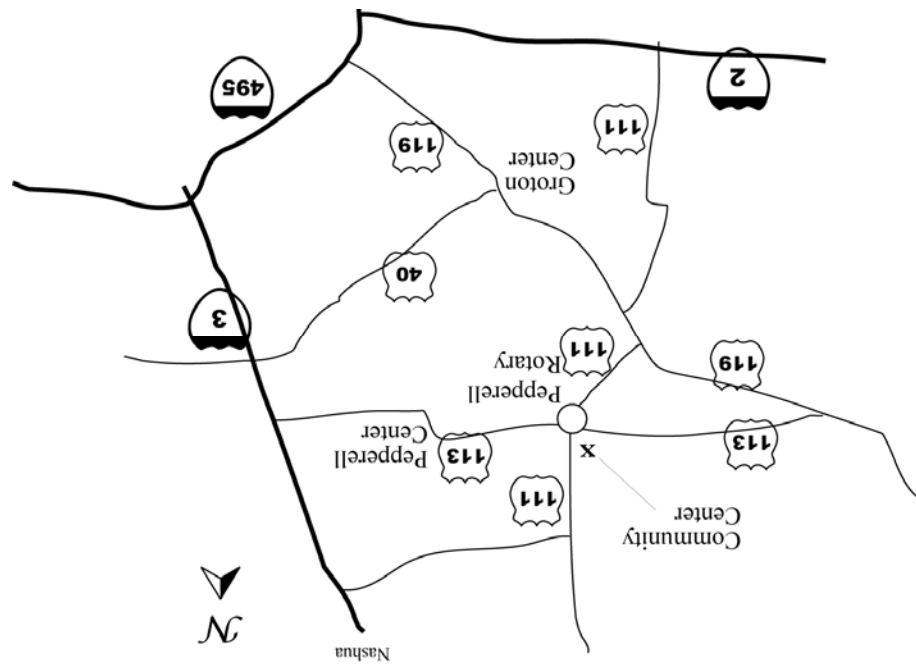
442.900 + 100Hz Repeater

147.345 + 100 Hz Repeater

53.890 - 100Hz Repeater

This newsletter is published monthly. Submissions, corrections and inquiries should be directed to the newsletter editor. Articles and graphics in most IBM-PC formats are OK.

Copyright 2005 NVARC



Nashoba Valley Amateur Radio Club

PO Box 900

Pepperell, MA 01463-0900